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AP33438 (068443.0106)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Lund *et al.*

Serial No. : 09/982,616 Examiner : To Be Assigned

Filed : October 17, 2001 Group Art Unit: 1643

For : CD38 MODULATED CHEMOTAXIS

INFORMATION
DISCLOSURE
STATEMENT

EXPRESS MAIL LABEL NO: ET346773398US

October 2, 2002

Commissioner for Patents
Washington, D.C. 20231

Sir:

Pursuant to the provisions of 37 C.F.R. §§ 1.97 and 1.98, Applicants respectfully request that the citations listed herein be considered by the Examiner and made of record in the relating to the above-mentioned application. The citations listed below are also listed in the accompanying PTO Form 1449.

1. Graeff R, Munshi C, Aarhus R, Johns M, Lee HC. A single residue at the active site of CD38 determines its NAD cyclizing and hydrolyzing activities. *J. Biol. Chem.* 2001;276:12169-12173.
2. Day TA, Haithcock J, Kimber M, Maule AG. Functional ryanodine receptor channels in flatworm muscle fibres. *Parasitology* 2000;120:417-422.
3. Munshi C, Aarhus R, Graeff R, Walseth TF, Levitt D, Lee HC. Identification of the enzymatic active site of CD38 by site-directed mutagenesis. *J. Biol. Chem.* 2000;275:21566-21571.
4. United States Patent No. 5,958,723, by Abramovitz *et al.*, filed as United States Patent Application Serial No. 08/812,203 on March 6, 1997, issued on September 28, 1999, entitled DNA encoding prostaglandin receptor DP."
5. Guse AH. Cyclic ADP-ribose: a novel Ca^{2+} mobilising second messenger. *Cell. Signal* 1999;11:309-316.
6. Guse AH, da Silva CP, Berg I, Skapenko AL, Weber K, Heyer P, Hohenegger M, Ashamu GA, Schulze-Koops H, Potter BV, Mayr GW. Regulation of calcium signalling in T lymphocytes by the second messenger cyclic ADP-ribose. *Nature* 1999;398:70-73.
7. Lee HC. A unified mechanism of enzymatic synthesis of two calcium messengers: cyclic ADP-ribose and NAADP. *Biol. Chem.* 1999;380:785-793.

8. Lund FE, Muller-Steffner HM, Yu N, Stout CD, Schuber F, Howard MC. CD38 signaling in B lymphocytes is controlled by its ectodomain but occurs independently of enzymatically generated ADP-ribose or cyclic ADP-ribose. *J. Immunol.* 1999;162:2693-2702.
9. Munshi C, Thiel DJ, Mathews II, Aarhus R, Walseth TF, Lee HC. Characterization of the active site of ADP-bibosyl cyclase. *J. Biol Chem* 1999;274:30770-30777.
10. Berthelier V, Tixier JM, Muller-Steffner H, Schuber F, Deterre P. Human CD38 is an authentic NAD(P)+ glycohydrolase. *Biochem. J* 1998;330:1383-1390.

11. Cockayne DA, Muchamuel T, Grimaldi JC, Muller-Steffner H, Randall TD, Lund FE, Murray R, Schuber F, Howard MC. Mice deficient for the ecto-nicotinamide adenine dinucleotide glycohydrolase CD38 exhibit altered humoral immune responses. *Blood* 1998;92:1324-1333.
12. Fernandez JE, Deaglio S, Donati D, Beusan IS, Corno F, Aranega A, Forni M, Falini B, Malavasi F. Analysis of the distribution of human CD38 and of its ligand CD31 in normal tissues. *J. Biol. Regul. Homeost. Agents* 1998;12:81-91.
13. Silva CL, Cunha VM, Mendonca-Silva DL, Noel F. Evidence of ryanodine receptors in schistosoma mansoni. *Biochem. Pharmacol.* 1998;56:997-1003.
14. Graeff RM, Walseth TF, Lee HC. Radioimmunoassay for measuring endogenous levels of cyclic ADP-ribose in tissues. *Methods Enzymol.* 1997;280:230-241.

15. Higashida H, Yokoyama S, Hashii M, Taketo M, Higashida M, Takayasu T, Ohshima T, Takasawa S, Okamoto H, Noda M. Muscarinic receptor-mediated dual regulation of ADP-ribosyl cyclase in NG108-15 neuronal cell membranes. *J. Biol. Chem.* 1997;272:31272-31277.
16. Vu CQ, Coyle DL, Jacobson MK. Natural occurrence of 2'-phospho-cyclic ADP ribose in mammalian tissues. *Biochem. Biophys. Res. Commun.* 1997 Jul 30;236(3):723-726.
17. Vu CQ, Coyle DL, Tai HH, Jacobson EL, Jacobson MK. Intramolecular ADP-ribose transfer reactions and calcium signalling. Potential role of 2'-phospho-cyclic ADP-ribose in oxidative stress. *Adv. Exp. Med. Biol.* 1997;419:381-388.
18. Graeff RM, Walseth TF, Hill HK, Lee HC. Fluorescent analogs of cyclic ADP-ribose: synthesis, spectral characterization, and use. *Biochemistry* 1996;35:379-386.
19. Muller-Steffner HM, Augustin A, Schuber F. Mechanism of cyclization of pyridine nucleotides by bovine spleen NAD⁺ glycohydrolase. Mechanism of cyclization of pyridine nucleotides by bovine spleen NAD⁺ glycohydrolase. *J. Biol. Chem.* 1996;271:23967-23972.
20. Prasad GS, McRee DE, Stura EA, Levitt DG, Lee HC, Stout CD. Crystal structure of Aplysia ADP ribosyl cyclase, a homologue of the bifunctional ectozyme CD38. *Nat. Struct. Biol.* 1996;3:957-964.

21. Gadangi P, Longaker M, Naime D, Levin RI, Recht PA, Montesinos MC, Buckley MT, Carlin G, Cronstein BN. The anti-inflammatory mechanism of sulfasalazine is related to adenosine release at inflamed sites. *J. Immunol.* 1996;156:1937-1941.
22. Aarhus R, Graeff RM, Dickey DM, Walseth TF, Lee HC. ADP-ribosyl cyclase and CD38 catalyze the synthesis of a calcium-mobilizing metabolite from NADP. *J. Biol. Chem.* 1995;270:30327-30333.
23. Takahashi K, Kukimoto I, Tokita K, Inageda K, Inoue S, Kontani K, Hoshino S, Nishina H, Kanaho Y, Katada T. Accumulation of cyclic ADP-ribose measured by a specific radioimmunoassay in differentiated human leukemic HL-60 cells with all-trans-retinoic acid. *FEBS Lett.* 1995;371:204-208.
24. Bronstein I, Fortin JJ, Voyta JC, Juo RR, Edwards B, Olesen CE, Lijam N, Kricka LJ. Chemiluminescent reporter gene assays: sensitive detection of the GUS and SEAP gene products. *Biotechniques* 1994;17:172-174, 176-177.
25. Day TA, Bennett JL, Pax RA. Serotonin and its requirement for maintenance of contractility in muscle fibres isolated from *Schistosoma mansoni*. *Parasitology* 1994;108:425-432.
26. Day TA, Maule AG, Shaw C, Halton DW, Moore S, Bennett JL, Pax RA. Platyhelminth FMRFamide-related peptides (FaRPs) contract *Schistosoma*

mansoni (Trematoda: Digenea) muscle fibres in vitro. *Parasitology* 1994;109:455-459.

27. Graeff RM, Walseth TF, Fryxell K, Branton WD, Lee HC. Enzymatic synthesis and characterizations of cyclic GDP-ribose. A procedure for distinguishing enzymes with ADP-ribosyl cyclase activity. *J. Biol. Chem.* 1994;269:30260-30267.

28. Koguma T, Takasawa S, Tohgo A, Karasawa T, Furuya Y, Yonekura H, Okamoto H. Cloning and characterization of cDNA encoding rat ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase (homologue to human CD38) from islets of Langerhans. *Biochim. Biophys. Acta* 1994;1223:160-162.

29. Murphy PM. The molecular biology of leukocyte chemoattractant receptors. *Annu. Rev. Immunol.* 1994;12:593-633.

30. Weis JH. 'Race no more': an alternative approach to cloning the 5' end of transcripts. *Nucleic Acids Res.* 1994;22:3427-3428.

31. Day TA, Orr N, Bennett JL, Pax RA. Voltage-gated currents in muscle cells of *Schistosoma mansoni*. *Parasitology* 1993;106:471-477.

32. Galione A, White A, Willmott N, Turner M, Potter BV, Watson SP. cGMP mobilizes intracellular Ca²⁺ in sea urchin eggs by stimulating cyclic ADP-ribose synthesis. *Nature* 1993;365:456-459.

33. Harada N, Santos-Argumedo L, Chang R, Grimaldi JC, Lund FE, Brannan CI, Copeland NG, Jenkins NA, Heath AW, Parkhouse RM, Howeard M. Expression cloning of a cDNA encoding a novel murine B cell activation marker. Homology to human CD38. *J. Immunol.* 1993;151:3111-3118.
34. Howard M, Grimaldi JC, Bazan JF, Lund FE, Santos-Argumedo L, Parkhouse RM, Walseth TF, Lee HC. Formation and hydrolysis of cyclic ADP-ribose catalyzed by lymphocyte antigen CD38. *Science* 1993;262:1056-1059.
35. Sorrentino V, Volpe P. Ryanodine receptors: how many, where and why? *Trends Pharmacol. Sci.* 1993;14:98-103.

36. Hakamata Y, Nakai J, Takeshima H, Imoto K. Primary structure and distribution of a novel ryanodine receptor/calcium release channel from rabbit brain. *FEBS Lett* 1992;312:229-235.
37. Shinkai Y, Rathbun G, Lam KP, Oltz EM, Stewart V, Mendelsohn M, Charron J, Datta M, Young F, Stall AM, Alt FW. RAG-2-deficient mice lack mature lymphocytes owing to inability to initiate V(D)J rearrangement. *Cell* 1992;68:855-867.
38. Galione A, Lee HC, Busa WB. Ca(2+)-induced Ca2+ release in sea urchin egg homogenates: modulation by cyclic ADP-ribose. *Science* 1991;253:1143-1146.
39. Lee HC, Aarhus R. ADP-ribosyl cyclase: an enzyme that cyclizes NAD+ into a calcium-mobilizing metabolite. *Cell Regul.* 1991;2:203-209.

40. Jackson DG, Bell JI. Isolation of a cDNA encoding the human CD38 (T10) molecule, a cell surface glycoprotein with an unusual discontinuous pattern of expression during lymphocyte differentiation. *J. Immunol.* 1990;144:2811-2815.
41. Baggolini M, Walz A, Kunkel SL. Neutrophil-activating peptide-1/interleukin 8, a novel cytokine that activates neutrophils. *J. Clin. Invest.* 1989;84:1045-1049.
42. Lee HC, Walseth TF, Bratt GT, Hayes RN, Clapper DL. Structural determination of a cyclic metabolite of NAD⁺ with intracellular Ca²⁺-mobilizing activity. *J. Biol. Chem.* 1989;264:1608-1615.
43. Frohman MA, Dush MK, Martin GR. Rapid production of full-length cDNAs from rare transcripts: amplification using a single gene-specific oligonucleotide primer. *Proc. Natl. Acad. Sci. USA* 1988;85:8998-9002.
44. Clapper DL, Walseth TF, Dargie PJ, Lee HC. Pyridine nucleotide metabolites stimulate calcium release from sea urchin egg microsomes desensitized to inositol trisphosphate. *J. Biol. Chem.* 1987;262:9561-9568.
45. Muller HM, Muller CD, Schuber F. NAD⁺ glycohydrolase, an ecto-enzyme of calf spleen cells. *Biochem. J* 1983;212(2):459-464.
46. Falk W, Goodwin RH Jr, Leonard EJ. A 48-well micro chemotaxis assembly for rapid and accurate measurement of leukocyte migration. *J. Immunol. Methods* 1980;33:239-247.

47. Abdallah MA, Biellmann JF, Nordstrom B, Branden CI. The conformation of adenosine diphosphoribose and 8-bromo-adenosine diphosphoribose when bound to liver alcohol dehydrogenase. Eur. J. Biochem. 1975;50:475-481.

Identification of the above-listed citations is not to be construed as an admission of the applicants or attorneys for applicants that such citations are available as "prior art" against the subject application.

Applicants believe no fee is required for submission of this Information Disclosure Statement. If, however, any fee is required, please charge our Deposit Account No. 02-4377. Two copies of this paper are enclosed.

Respectfully submitted,

Carmella L. Stephens

Lisa B. Kole
Patent Office Reg. No. 35,225

Carmella L. Stephens
Patent Office Reg. No. 41,328

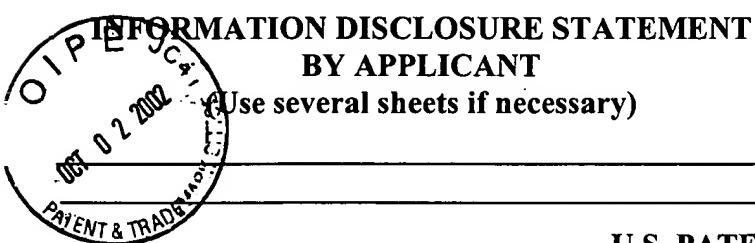
Attorneys for Applicants
(212) 408-2628

Enclosures

Form PTO-1449 U.S. Department of Commerce
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Atty. Docket No.
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U.S. PATENT DOCUMENTS

*Exam. Init.		Document No.							Date	Name	Class	Subclass	Filing Date if Appropriate
	4	5	9	5	8	7	2	3	9/28/99	Abramovitz et al.	435	69.1	

FOREIGN PATENT DOCUMENT

		Document No.							Date	Country	Class	SubClass	Translator Yes No

OTHER DOCUMENTS (including Author, Title Date, Pertinent Pages, Etc.)

	1.	Graeff R, Munshi C, Aarhus R, Johns M, Lee HC. A single residue at the active site of CD38 determines its NAD cyclizing and hydrolyzing activities. <i>J. Biol. Chem.</i> 2001;276:12169-12173.
	2.	Day TA, Haithcock J, Kimber M, Maule AG. Functional ryanodine receptor channels in flatworm muscle fibres. <i>Parasitology</i> 2000;120:417-422.
	3.	Munshi C, Aarhus R, Graeff R, Walseth TF, Levitt D, Lee HC. Identification of the enzymatic active site of CD38 by site-directed mutagenesis. <i>J. Biol. Chem.</i> 2000;275:21566-21571.
	5.	Guse AH. Cyclic ADP-ribose: a novel Ca^{2+} mobilising second messenger. <i>Cell. Signal</i> 1999;11:309-316.
	6.	Guse AH, da Silva CP, Berg I, Skapenko AL, Weber K, Heyer P, Hohenegger M, Ashamu GA, Schulze-Koops H, Potter BV, Mayr GW. Regulation of calcium signalling in T lymphocytes by the second messenger cyclic ADP-ribose. <i>Nature</i> 1999;398:70-73.
	7.	Lee HC. A unified mechanism of enzymatic synthesis of two calcium messengers: cyclic ADP-ribose and NAADP. <i>Biol. Chem.</i> 1999;380:785-793.
	8.	Lund FE, Muller-Steffner HM, Yu N, Stout CD, Schuber F, Howard MC. CD38 signaling in B lymphocytes is controlled by its ectodomain but occurs independently of enzymatically generated ADP-ribose or cyclic ADP-ribose. <i>J. Immunol.</i> 1999;162:2693-2702.
	9.	Munshi C, Thiel DJ, Mathews II, Aarhus R, Walseth TF, Lee HC. Characterization of the active site of ADP-bibosyl cyclase. <i>J. Biol. Chem.</i> 1999;274:30770-30777.
	10.	Berthelier V, Tixier JM, Muller-Steffner H, Schuber F, Deterre P. Human CD38 is an authentic NAD(P)+ glycohydrolase. <i>Biochem. J.</i> 1998;330:1383-1390.
	11.	Cockayne DA, Muchamuel T, Grimaldi JC, Muller-Steffner H, Randall TD, Lund FE, Murray R, Schuber F, Howard MC. Mice deficient for the ecto-nicotinamide adenine dinucleotide glycohydrolase CD38 exhibit altered humoral immune responses. <i>Blood</i> 1998;92:1324-1333.

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12. Fernandez JE, Deaglio S, Donati D, Beusan IS, Corno F, Aranega A, Forni M, Falini B, Malavasi F. Analysis of the distribution of human CD38 and of its ligand CD31 in normal tissues. *J. Biol. Regul. Homeost. Agents* 1998;12:81-91.

13. Silva CL, Cunha VM, Mendonca-Silva DL, Noel F. Evidence of ryanodine receptors in schistosoma mansoni. *Biochem. Pharmacol.* 1998;56:997-1003.

14. Graeff RM, Walseth TF, Lee HC. Radioimmunoassay for measuring endogenous levels of cyclic ADP-ribose in tissues. *Methods Enzymol.* 1997;280:230-241.

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16. Vu CQ, Coyle DL, Jacobson MK. Natural occurrence of 2'-phospho-cyclic ADP ribose in mammalian tissues. *Biochem. Biophys. Res. Commun.* 1997 Jul 30;236(3):723-726.

17. Vu CQ, Coyle DL, Tai HH, Jacobson EL, Jacobson MK. Intramolecular ADP-ribose transfer reactions and calcium signalling. Potential role of 2'-phospho-cyclic ADP-ribose in oxidative stress. *Adv. Exp. Med. Biol.* 1997;419:381-388.

18. Graeff RM, Walseth TF, Hill HK, Lee HC. Fluorescent analogs of cyclic ADP-ribose: synthesis, spectral characterization, and use. *Biochemistry* 1996;35:379-386.

19. Muller-Steffner HM, Augustin A, Schuber F. Mechanism of cyclization of pyridine nucleotides by bovine spleen NAD⁺ glycohydrolase. Mechanism of cyclization of pyridine nucleotides by bovine spleen NAD⁺ glycohydrolase. *J. Biol. Chem.* 1996;271:23967-23972.

20. Prasad GS, McRee DE, Stura EA, Levitt DG, Lee HC, Stout CD. Crystal structure of Aplysia ADP ribosyl cyclase, a homologue of the bifunctional ectozyme CD38. *Nat. Struct. Biol.* 1996;3:957-964.

21. Gadangi P, Longaker M, Naime D, Levin RI, Recht PA, Montesinos MC, Buckley MT, Carlin G, Cronstein BN. The anti-inflammatory mechanism of sulfasalazine is related to adenosine release at inflamed sites. *J. Immunol.* 1996;156:1937-1941.

22. Aarhus R, Graeff RM, Dickey DM, Walseth TF, Lee HC. ADP-ribosyl cyclase and CD38 catalyze the synthesis of a calcium-mobilizing metabolite from NADP. *J. Biol. Chem.* 1995;270:30327-30333.

23. Takahashi K, Kukimoto I, Tokita K, Inageda K, Inoue S, Kontani K, Hoshino S, Nishina H, Kanaho Y, Katada T. Accumulation of cyclic ADP-ribose measured by a specific radioimmunoassay in differentiated human leukemic HL-60 cells with all-trans-retinoic acid. *FEBS Lett.* 1995;371:204-208.

24. Bronstein I, Fortin JJ, Voyta JC, Juo RR, Edwards B, Olesen CE, Lijam N, Kricka LJ. Chemiluminescent reporter gene assays: sensitive detection of the GUS and SEAP gene products. *Biotechniques* 1994;17:172-174, 176-177.

25. Day TA, Bennett JL, Pax RA. Serotonin and its requirement for maintenance of contractility in muscle fibres isolated from *Schistosoma mansoni*. *Parasitology* 1994;108:425-432.

26. Day TA, Maule AG, Shaw C, Halton DW, Moore S, Bennett JL, Pax RA. Platyhelminth FMRFamide-related peptides (FaRPs) contract *Schistosoma mansoni* (Trematoda: Digenea) muscle fibres in vitro. *Parasitology* 1994;109:455-459.

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	28.	Koguma T, Takasawa S, Tohgo A, Karasawa T, Furuya Y, Yonekura H, Okamoto H. Cloning and characterization of cDNA encoding rat ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase (homologue to human CD38) from islets of Langerhans. <i>Biochim. Biophys. Acta</i> 1994;1223:160-162.
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	32.	Gialone A, White A, Willmott N, Turner M, Potter BV, Watson SP. cGMP mobilizes intracellular Ca ²⁺ in sea urchin eggs by stimulating cyclic ADP-ribose synthesis. <i>Nature</i> 1993;365:456-459.
	33.	Harada N, Santos-Argumedo L, Chang R, Grimaldi JC, Lund FE, Brannan CI, Copeland NG, Jenkins NA, Heath AW, Parkhouse RM, Howard M. Expression-cloning of a cDNA encoding a novel murine B cell activation marker. Homology to human CD38. <i>J. Immunol.</i> 1993;151:3111-3118.
	34.	Howard M, Grimaldi JC, Bazan JF, Lund FE, Santos-Argumedo L, Parkhouse RM, Walseth TF, Lee HC. Formation and hydrolysis of cyclic ADP-ribose catalyzed by lymphocyte antigen CD38. <i>Science</i> 1993;262:1056-1059.
	35.	Sorrentino V, Volpe P. Ryanodine receptors: how many, where and why? <i>Trends Pharmacol. Sci.</i> 1993;14:98-103.
	36.	Hakamata Y, Nakai J, Takeshima H, Imoto K. Primary structure and distribution of a novel ryanodine receptor/calcium release channel from rabbit brain. <i>FEBS Lett</i> 1992;312:229-235.
	37.	Shinkai Y, Rathbun G, Lam KP, Oltz EM, Stewart V, Mendelsohn M, Charron J, Datta M, Young F, Stall AM, Alt FW. RAG-2-deficient mice lack mature lymphocytes owing to inability to initiate V(D)J rearrangement. <i>Cell</i> 1992;68:855-867.
	38.	Gialone A, Lee HC, Busa WB. Ca(2+)-induced Ca ²⁺ release in sea urchin egg homogenates: modulation by cyclic ADP-ribose. <i>Science</i> 1991;253:1143-1146.
	39.	Lee HC, Aarhus R. ADP-ribosyl cyclase: an enzyme that cyclizes NAD ⁺ into a calcium-mobilizing metabolite. <i>Cell Regul.</i> 1991;2:203-209.
	40.	Jackson DG, Bell JI. Isolation of a cDNA encoding the human CD38 (T10) molecule, a cell surface glycoprotein with an unusual discontinuous pattern of expression during lymphocyte differentiation. <i>J. Immunol.</i> 1990;144:2811-2815.
	41.	Baggiolini M, Walz A, Kunkel SL. Neutrophil-activating peptide-1/interleukin 8, a novel cytokine that activates neutrophils. <i>J. Clin. Invest.</i> 1989;84:1045-1049.

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43. Frohman MA, Dush MK, Martin GR. Rapid production of full-length cDNAs from rare transcripts: amplification using a single gene-specific oligonucleotide primer. Proc. Natl. Acad. Sci. USA 1988;85:8998-9002.

44. Clapper DL, Walseth TF, Dargie PJ, Lee HC. Pyridine nucleotide metabolites stimulate calcium release from sea urchin egg microsomes desensitized to inositol trisphosphate. J. Biol. Chem. 1987;262:9561-9568.

45. Muller HM, Muller CD, Schuber F. NAD⁺ glycohydrolase, an ecto-enzyme of calf spleen cells. Biochem. J 1983;212(2):459-464.

46. Falk W, Goodwin RH Jr, Leonard EJ. A 48-well micro chemotaxis assembly for rapid and accurate measurement of leukocyte migration. J. Immunol. Methods 1980;33:239-247.

47. Abdallah MA, Biellmann JF, Nordstrom B, Branden CI. The conformation of adenosine diphosphoribose and 8-bromo-adenosine diphosphoribose when bound to liver alcohol dehydrogenase. Eur. J. Biochem. 1975;50:475-481.

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